

## Introduction:

**the coach** Is a device thought to exercise the use of memory. It is particularly addressed to old people and it can contribute to the prevention of degenerative phenomena. It can also be useful to train children to recognize primary colors and notes. It can be used by all those people who want to test their memory and their reflexes. The electronic system, controlled by a micro-controller of new generation, can be powered connecting it to the mains with a power pack, directly to the computer with a USB cable, or using 3 AAA batteries; all of them are supplied in the kit. The case is made of a non-toxic and non-magnetic material. The design and the dimensions have been specifically studied to allow an easy use in view of the fact that the potential users are children or people with a condition. Moreover, 4 comfortable suction caps can hold it on a flat top to avoid falls which could damage the internal device.

## **the coach** is equipped with :

1. A switch (On – Off) for switching on and off the device **fig 1**;
2. A button “L” (Level) for the choice of the degree of difficulty **fig 2**;
3. A button “S” (Start) for the start of a random sequence of colors and associated sounds **fig.3**;
4. A sonorous device (loudspeaker) internal to the device;
5. A programmable microcontroller (internal to the device);
6. An alphanumeric display with 7 segments **fig.4**;
7. 5 colored buttons, backlightable by leds and an opal membrane for the homogeneous diffusion of the light **fig.5**;
8. A memory for the collection and the monitoring of the performances;
9. A USB plug for the transfer and the analysis of the detected data of the performances from the device to the computer and for the direct supply from the computer by cable USB-USB included **fig.6**;

## Preparation for use:

1. Connect the device to the net by using the cable USB-USB and the power pack USB Power Supply or directly to a computer always by a cable USB-USB both included with the device .
2. At the start the device sets automatically on the operator function.
3. Select the operator with the L button.
4. Simultaneously press L e S buttons for switching from the operator function to the level-of-difficulty function, then select the level with L button and confirm with the S button to start the exercise.

## Positioning of the device :

1. The device can be positioned on every type of top. To avoid accidental falls and a potential damage as a consequence, it is endowed with 4 suction caps, which positioned in the housings allow to hold the device on any support with a flat top.

## Levels of functioning:

4 levels of functioning are provided, appropriately pre-selected, according to the degree of difficulty consented by the physical conditions of the user.

### First level:

The exercise is limited to only the three buttons below, which will light up in random, followed by the issue of a musical note different for each button. The repetition of the sequence made by the operator is subject to a maximum time limit of 2 minutes (non timed sequence). The mistakes of the user will be simultaneously reported by a “bip”. The exercise will automatically resume after 3 seconds.

### Second level:

The exercise is the same as the first level, but the total execution time for each sequence will be limited to 15 seconds (timed sequence).

### Third level:

The exercise is extended to all 5 buttons and the execution follows the pattern of the first level.

### Fourth level:

The exercise is similar to the third level but the response time between a sequence and the other sequence will be gradually decreased.

## Functional Characteristics:

### Operator Function:

The selection of the Operator Function is made by pushing at the same time, the “L” (Level) and “S” (Start) buttons and it will be confirmed by the switching on of the decimal point on the display. By pushing the “L” button you can select the letter corresponding to the operator. By pushing the “S” button the selection of the operator will be confirmed.

### Level function:

The selection of the Level function is made by pushing at the same time the “L” and “S” buttons. By pushing the “L” button you can select the desired level, then you have to push the “S” button to confirm.

### Default:

At the switching on the device is set up to enable the Operator function.

The device is equipped with an internal memory, **totally overwritable**, than can manage 10 different users and memorize the performances. The USB port will allow the download of the data stored that can be compared with the previous recordings to define the evolution of the rehabilitation undertaken.

### Supply:

The device is supplied by:

1. Three AAA batteries;
2. Through the mains by the USB Power Supply power pack and the USB cable included.
3. From the PC by direct connection with the USB cable included.

<b>Electrical features:</b> <ol style="list-style-type: none"><li>1. Supply: 5VDC</li><li>2. N°3 batteries AAA</li><li>3. Microcontroller 18F4550</li><li>4. RAM 2048 byte</li><li>5. Eeprom 256 byte</li><li>6. FLASH ROM 32kbytes</li><li>7. Eprom dati 2Kx8</li><li>8. Visualisation: 7 segments display</li></ol>	<b>Mechanical features:</b> <ol style="list-style-type: none"><li>1. Case in non-toxic and nonmagnetic ABS</li><li>2. Compact and ergonomic structure</li><li>3. Weight: 150 g</li><li>4. Dimensions: 200X100X50 mm.</li></ol>	<b>Acoustic signal:</b> <ol style="list-style-type: none"><li>1. Loudspeaker 32 Ω</li></ol> <b>Functional features:</b> <ol style="list-style-type: none"><li>1. Temperature:10°C.+50°C</li></ol> <b>Reference standard:</b> <ol style="list-style-type: none"><li>1. CEI EN 50332-2</li></ol>
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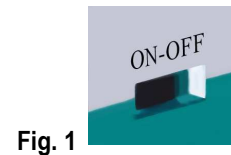


Fig. 1



Fig. 2



Fig.3



Fig. 6



Fig. 5

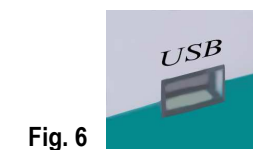


Fig. 6

## Notes for the disposal of the product valid for the EU:

The product must be disposed of properly in the collection depots. It is strictly prohibited to dispose of the product as a urban waste.

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**the coach**



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**Instruction Manual**

**the coach**



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